



EMERALD ASH BORER

can turn a healthy forest
into a dead forest.

Stop the spread of this killer.
Here's how you can help.

Don't move firewood

- EAB travels in firewood. When you camp, leave your wood at home. Buy only local firewood, and burn it all before you leave.

Avoid planting ash trees

- EAB kills only ash trees. Choose other large shade trees for landscaping. Find good alternatives at www.MissouriConservation.org/8804.

Investigate potential EAB infestations

- Follow the steps in this brochure to determine whether your ash tree suffers from EAB or some other ailment.

If you believe your ASH TREE is
infested with EAB, call toll-free
1-866-716-9974

Not sure if your ASH TREE suffers
from EAB? Call a certified arborist or
forester for help. Use these Web sites to
locate a qualified professional in your area:

www.MissouriConservation.org/18938

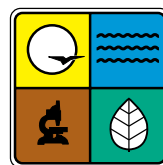
www.MissouriConservation.org/18939

For more information about EAB,
visit the following Web sites:

www.eab.missouri.edu

www.MissouriConservation.org/10985

www.emeraldashborer.info



UNIVERSITY OF MISSOURI
Extension

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Equal opportunity to participate in and benefit from programs of the Missouri Department of Conservation is available to all individuals without regard to their race, color, national origin, sex, age or disability. Questions should be directed to the Department of Conservation, P.O. Box 180, Jefferson City, MO 65102, (573) 751-4115 (voice) or 800-735-2966 (TTY), or to the U.S. Fish and Wildlife Service Division of Federal Assistance, 4401 N. Fairfax Drive, Mail Stop: MBSP-4020, Arlington, VA 22203.



EMERALD ASH BORER

CSI

Are your ash trees dying? A small green
beetle could be the culprit. Do some
crime scene investigation to find out.

CSI: YOUR ASH TREES

Dying ash trees. Winding S-shaped tunnels just under the bark. Small D-shaped holes on the trunk. These clues helped scientists uncover the presence of emerald ash borer (EAB), a deadly ash-tree killer, in Missouri in July 2008. Since the 1990s, EAB has destroyed millions of ash trees in at least 10 states. Help stop its spread. Use this brochure to investigate your yard or timber lot. **Call 866-716-9974 if you find evidence of EAB.**

Suspect's Profile

- Small metallic green beetle, ½ inch long
- Native to Asia
- Attacks only ash trees
- First detected in the U.S. in Michigan in 2002
- Has since spread to other states, including Indiana, Illinois and Missouri
- Larvae feed under bark, cutting off the flow of water and nutrients to the tree
- Travels in infested firewood and nursery stock



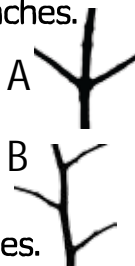
HOWARD RUSSELL
MICHIGAN STATE UNIVERSITY
BUGWOOD.ORG

PART 1: Identify the Victim

EAB attacks only ASH TREES. If your tree isn't an ash, you don't have EAB.

STEP 1. Look at your tree's branches.

- ☐ Oppositely branched as in Figure A? If yes, go to step 2.
- ☐ Alternately branched as in Figure B? If yes, STOP! Your tree is not an ash.



STEP 2. Look at your tree's leaves.

- ☐ Simple—a single leaf joined by a stalk to a woody stem as in Figure C. STOP! Your tree is not an ash.
- ☐ Compound—a group of leaflets joined by a stalk to a woody stem as in Figure D or E? Go to step 3.

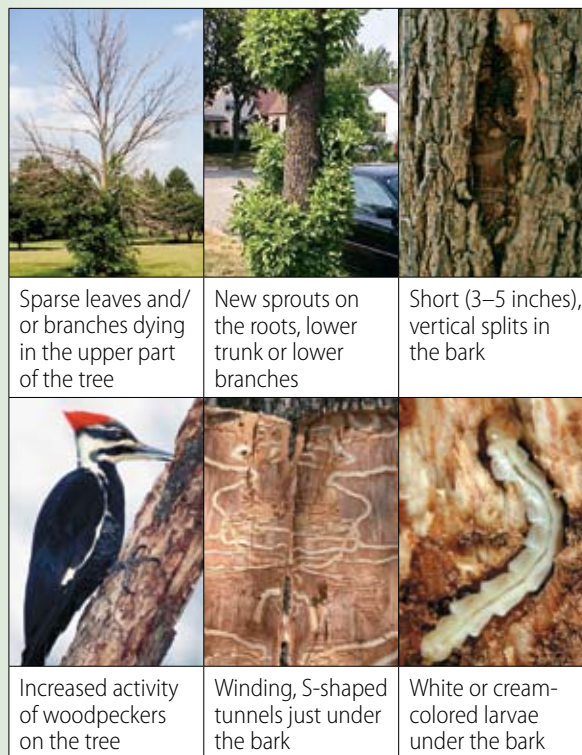


STEP 3. Look at the leaflets.

- ☐ 3 to 5 leaflets, margin smooth or coarsely toothed as in Figure D? STOP! Your tree is not an ash.
- ☐ 5 to 9 leaflets, margin smooth or finely toothed as in Figure E? Your tree is an ash. Go to Part 2.

PART 2: Examine the Victim

Does your tree look healthy or is it showing signs of attack? Look for these clues. If your ash tree shows two or more of these symptoms, move on to Part 3.



Sparse leaves and/or branches dying in the upper part of the tree

New sprouts on the roots, lower trunk or lower branches

Short (3–5 inches), vertical splits in the bark

Increased activity of woodpeckers on the tree

Winding, S-shaped tunnels just under the bark

White or cream-colored larvae under the bark

PART 3: Check for Exit Wounds

STEP 1. Do you see multiple holes in the trunk of your ash tree? If so, what shape are they?

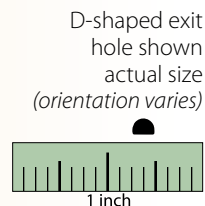
TIP: Use a knife to slightly shave the bark flat so you can gauge the true shape of the hole.

- ☐ Round as in figure F? STOP! EAB does not make round holes.
- ☐ Oval-shaped as in figure G? STOP! EAB does not make oval holes.
- ☐ D-shaped as in figure H? Go to step 2.



STEP 2. How wide are the D-shaped holes?

- ☐ About ⅛ inch. Your tree may be infested with EAB. CALL **1-866-716-9974**.
- ☐ ¼ inch or wider? STOP! EAB holes aren't usually this wide.



CLOCKWISE FROM TOP LEFT: DANIEL HERMS, OHIO STATE UNIVERSITY, BUGWOOD.ORG; JAMES W. SMITH, USDA APHIS PPQ, BUGWOOD.ORG; JOSEPH O'BRIEN, USDA FOREST SERVICE, BUGWOOD.ORG; JIM RATHER; ART WAGNER, USDA APHIS PPQ, BUGWOOD.ORG; DAVID CAPPAERT, WWW.FORESTRYIMAGES.ORG

F—MINNESOTA DEPT. OF NATURAL RESOURCES ARCHIVE, BUGWOOD.ORG
G—HANNES LEMME, BUGWOOD.ORG
H—JOSEPH O'BRIEN, USDA FOREST SERVICE, BUGWOOD.ORG